

**What is claimed is:**

1           1.    An apparatus for detecting an external optical  
2 disk drive's open/closed status, comprising:  
3           an upper housing;  
4           a cover, disposed above the upper housing, wherein a  
5                 convex portion is disposed at the front edge of  
6                 cover with a hook hole therein;  
7           a solenoid valve sub-assembly, fixed under the  
8                 bottom face of the upper housing;  
9           a solenoid valve base, comprising a body, a  
10                 connection part disposed on a side of the body,  
11                 and a spring support disposed on the other side  
12                 of the body, wherein a space is located between  
13                 the connection part and the spring support;  
14           a solenoid valve, fixed at the bottom of the  
15                 solenoid valve base;  
16           a hook device, engaged with the connection part of  
17                 the solenoid valve base;  
18           a torsion spring, disposed at the spring support of  
19                 the solenoid valve base;  
20           an elastic plate, disposed within the space of the  
21                 solenoid valve base;  
22           a lower housing, with a motherboard disposed  
23                 thereon, combined in assembly with the upper  
24                 housing, to contain and protect the motherboard  
25                 and the solenoid sub-assembly therein; and  
26           two wires, wherein one end of each wire is connected  
27                 to the torsion spring and the elastic plate

28                respectively, and the other end is electrically  
29                connected to the motherboard;  
30        wherein, when the cover is closed, the convex  
31                portion located at the front edge of the cover  
32                presses on the torsion spring, and the torsion  
33                spring contacts the elastic plate, resulting in  
34                an electrically conductive state; when the  
35                cover is opened, the torsion spring is  
36                released, and the torsion spring disengages  
37                from the elastic plate, disconnecting the  
38                circuit.

1            2.    The apparatus for detecting an external optical  
2    disk drive's open/closed status of claim 1, further  
3    comprising a hinge, disposed at the back edge of the  
4    upper housing.

1            3.    The apparatus for detecting an external optical  
2    disk drive's open/closed status of claim 2, wherein the  
3    cover pivots on the hinge of the upper housing to open  
4    and close.

1            4.    The apparatus for detecting an external optical  
2    disk drive's open/closed status of claim 1, wherein the  
3    solenoid valve further comprises a retractable shaft.

5            5.    The apparatus for detecting an external optical  
6    disk drive's open/closed status of claim 4, wherein the  
7    hook device includes a shaft, a leg, and a hook, and the  
8    shaft is hinged at the connection part of the solenoid  
9    valve base, and the leg is engaged with the retractable  
10   shaft of the solenoid valve.